

Work Order ID 108728

October-29-13 9:52:21 AM

647.9411
B108728

108728

Page 1

Item ID: 647.9411

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Upper Deflector

Start Date: 10/29/13 Start Qty: 10.00

10

Cust Item ID:

Required Date: 10/29/13 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 13-11-01

Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____

SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
647.9400	A

100		0.00							
-----	--	------	--	--	--	--	--	--	--

1000

BAND SAW

Bandsaw	Memo	0.00							
---------	------	------	--	--	--	--	--	--	--

Jeaspa Bandsaw Cut Blank at 32.625"

*** ONE BLANK MAKES TWO PARTS***

110		0.00							
-----	--	------	--	--	--	--	--	--	--

110

HAAS CNC VERTICAL MACHINING #1

HAAS 1	Memo	0.00							
--------	------	------	--	--	--	--	--	--	--

HAAS CNC vertical machine #1

1-Machine per folio FB196

DWG REV: A

FOLIO REV: AA

2- deburr and break all sharp edges

DK

13-11-12

B-A

13/11/16

3

Ø

6

Ø

DAS
08
2-83

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

108728

October-29-13 9:52:21 AM

N900040100

Setup Start ***NS1***

Stop *NS2*

10

10

Reference:

Run Start *NR1*

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

**Insp.
Stamp**

120

0.00

D.A 13/11/16

6 0

DAS
08
9-89

0.00

130

0.00

Quality Control

0.00
0.00

11 13-11-18

6 ~~0~~

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

Work Order ID 108728***108728***

Page 3

October-29-13 9:52:21 AM

Item ID: 647.9411

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Upper Deflector

Start Date: 10/29/13 Start Qty: 10.00

10

Cust Item ID:

Required Date: 10/29/13 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

Outsource process-Anodize per QSI017 4.1.10.1

0.00

140

Outsource4

Outsource process - Anodize

Memo

Issue P/O to ATG :

22153

0.00

1- Black Anodize as per Dwg 647.9400

2- PRIME AS PER DWG, SEE NOTE #7 (**DISREGARD AFTER
ASSEMBLY**)

Certification of Conformity is required

CL 13/11/22 10

150

Receive & inspect for Damage & Mat'l Certs

0.00

150

Packaging

Packaging

Memo

0.00

60x 13-12-19DAS
26
9-89

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											

FAULT CATEGORY									
Landing Gear			General						
<input type="checkbox"/>	Bending	<input type="checkbox"/>	Bend	<input type="checkbox"/>	Grain	<input type="checkbox"/>	Ovalized	<input type="checkbox"/>	Pressure/Forced
<input type="checkbox"/>	Centre Not Concentric to O/S	<input type="checkbox"/>	BOM/Route	<input type="checkbox"/>	Hardware	<input type="checkbox"/>	Over/Under tolerance	<input type="checkbox"/>	Temperature/Cure
<input type="checkbox"/>	Cracks	<input type="checkbox"/>	Broken/Damaged	<input type="checkbox"/>	Inspection Incomplete	<input type="checkbox"/>	Part Incorrect	<input type="checkbox"/>	Weld
<input type="checkbox"/>	Crushed/Crimped	<input type="checkbox"/>	Burrs	<input type="checkbox"/>	Instructions Incomplete/Unclear	<input type="checkbox"/>	Part Lost/Missing	<input type="checkbox"/>	Wrong Stock Pulled
<input type="checkbox"/>	Cuffs	<input type="checkbox"/>	Contamination	<input type="checkbox"/>	Maintenance	<input type="checkbox"/>	Part Moved		
<input type="checkbox"/>	Heat Treat	<input type="checkbox"/>	Countersink	<input type="checkbox"/>	Mislabeled	<input type="checkbox"/>	Positioned Wrong		
<input type="checkbox"/>	Inspection Strip in Tube	<input type="checkbox"/>	Cut Too Short	<input type="checkbox"/>	Misread	<input type="checkbox"/>	Power Loss/Surge	<input type="checkbox"/>	Other
<input type="checkbox"/>	Ripples in Bend	<input type="checkbox"/>	Drill Holes	<input type="checkbox"/>	Offset				
<input type="checkbox"/>	Torque Waves in Extrusion	<input type="checkbox"/>	Drawing	<input type="checkbox"/>	Out of Calibration				
<input type="checkbox"/>	Turning Sequence	<input type="checkbox"/>	Finish	<input type="checkbox"/>	Out of Sequence				
<input type="checkbox"/>	Wave/Twist in Tube	<input type="checkbox"/>	Folio	<input type="checkbox"/>	Outside Dimensions				

Work Order ID 108728

108728

Page 4

October-29-13 9:52:21 AM

Item ID: 647.9411

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Upper Deflector

Start Date: 10/29/13 Start Qty: 10.00

10

Cust Item ID:

Required Date: 10/29/13 Req'd Qty: 10.00

10

Customer:

Reference:

Run Start *NR1*

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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155

155

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

DAS
27
9-89

13/12/19

6

180

180

Packaging

Packaging

Identify as per dwg & Stock Location: Composite 0.00

Memo

0.00

IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV

6

13-12-20

190

190

QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

13/12/30

13-12-20

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

Picklist Print

October-29-13 9:52:21 AM

Page 1/1

Work Order ID: 108728

Parent Item: 647.9411

Parent Item Name: Upper Deflector

Start Date: 10/29/13

Required Date: 10/29/13

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP REV: A NEW ISSUE JFS 13/06/19 VERIFY BY: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B5.000X0.375 7075-T6 BAR 5.000" X 0.375"		Purchased	No			100	f	54.2686	1.36	15			

Location

Loc Qty

Loc Code

MAT049

54.2686

123218

27.4357

m126390

2.7229

m126615

24.11

DR

18-11-12.

8.156ft.

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION <div style="display: flex; justify-content: space-between;"> <div> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/> </div> </div>	AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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DART AEROSPACE LTD	Work Order: 108728
Description: UPPER DEFLECTOR	Part Number: 647-9411
Inspection Dwg: 647.9400 Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.10 x 45°	+/- .010	0.100 x 45°	✓		Vern	GA-01
17.040	+/- .005	17.041	✓		H-6	31006
φ 0.185	+ .005 / - .001	φ 0.186	✓		Vern	GA-01
4.970	+/- .005	4.971	✓		H-6	31006
0.706	+/- .005	0.705	✓		Vern	GA-01
0.335	+/- .005	0.337	✓		H-6	31006
φ 0.165	+ .005 / - .001	φ 0.166	✓		Vern	GA-01
R 0.875	+/- .005	R 0.875	✓		R-6	ref.
φ 0.250	+ .005 / - .001	φ 0.251	✓		Vern	GA-01
0.358	+ .000 / - .003	0.3552	✓		Mic	GA-03
0.135 x 45°	+/- .005	0.135 x 45°	✓		Vern	GA-01
0.375	+/- .005	0.380	✓		Mic	GA-03

Measured by: A.A. DAS 08	Audited by: [Signature]	Preliminary Approval:
Date: 13/11/16	Date: 13-11-18	Date:

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03762				SHEET 1 OF 1	
	DWG NO. 647.9400	REV: A	PREPARED BY B. PETERS	DATE: 01/07/13	EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC.	
	DWG TITLE: DEFLECTORS					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER		
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE	REASON: REVISED HOLE DIAMETER TO REFLECT PIN DIAMETER IN NEXT ASSY.					

TAG	X LOC	Y LOC	SIZE
A1	-8.949	-4.066	Ø .201
A2	-6.172	-3.562	Ø .201
B1	-7.903	-5.121	Ø .253
C1	-5.978	-.267	Ø .165
C2	-3.863	-.267	Ø .165
C3	-1.758	-.267	Ø .165
D1	-5.159	-2.500	Ø .250

IS

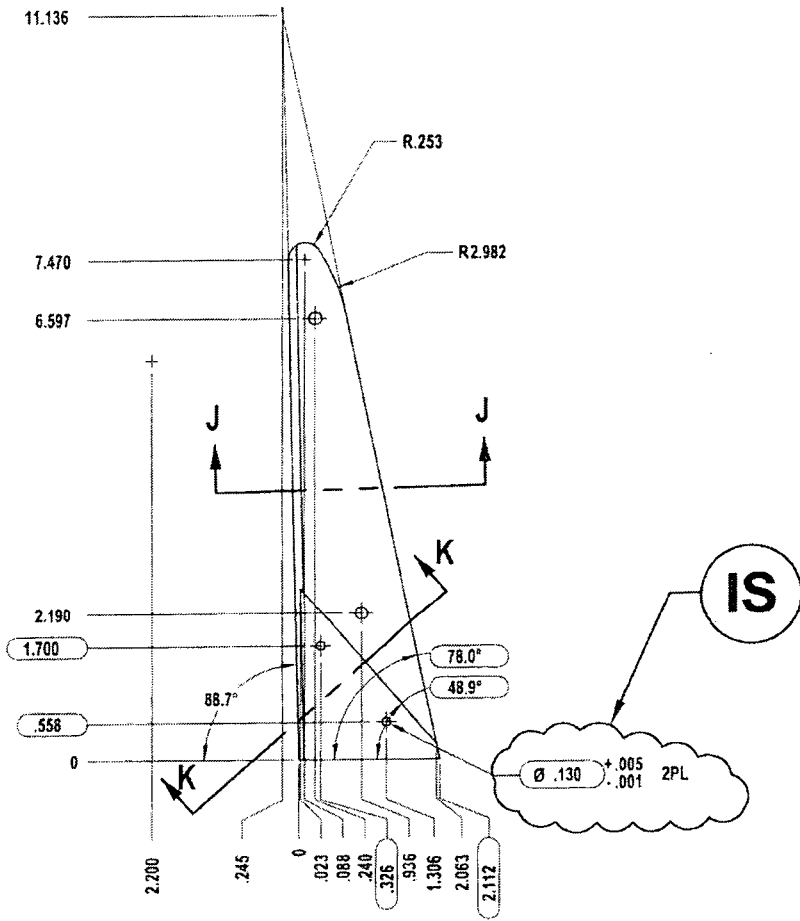
108728

SHEET 9, ZONE C8 IS:

DOCUMENTS EFFECTED:	<input type="checkbox"/> RFMS <input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRUC <input type="checkbox"/> ICA <input type="checkbox"/> BOM	CHANGE CATEGORY <input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR	DER REVIEW REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
---------------------	---	---	--

108728

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03739				SHEET 1 OF 1	
	DWG NO. 647.9400	REV: A	PREPARED BY B. PETERS	DATE: 12/07/12	EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC.	
	DWG TITLE: DEFLECTORS					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER		
TRANSACTION CODES (TC) A-ADD C-CREATE R-REVISE D-DELETE	REASON: REVISED TOLERANCE ON HOLE DIAMETER TO REFLECT RIVET DIAMETER.					



SHEET 8, ZONE D4 IS:

DOCUMENTS EFFECTED:	<input type="checkbox"/> RFMS <input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRU <input type="checkbox"/> ICA <input type="checkbox"/> BOM	CHANGE CATEGORY <input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR	DER REVIEW REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
---------------------	--	---	--

PROVISIONS			
REV	DESCRIPTION	DATE	APPROVED
	LAST PROTECTIVE RELEASE PPT		
NJC	NOTICE RELEASE	06-09-10	P (BAYC)
A	INCORPORATE (06-0002), 0306, 0308 AND 0308A	10-23-12	J. GARDEN

1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12. AMS-QQ-A-200/11 IS AN ACCEPTABLE ALTERNATIVE.

2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;

3. DE BURR AND BREAK ALL SHARP EDGES.

4. IDENTIFY IAW MPP-120. LASER ETCH P/N AND REVISION, 12 PT. CENTURY GOTHIC.

5. ALL DIMENSIONS SHOWN PRIOR TO FINISH.

△ 6 APPLY F/N 17 TO FAYING SURFACES.

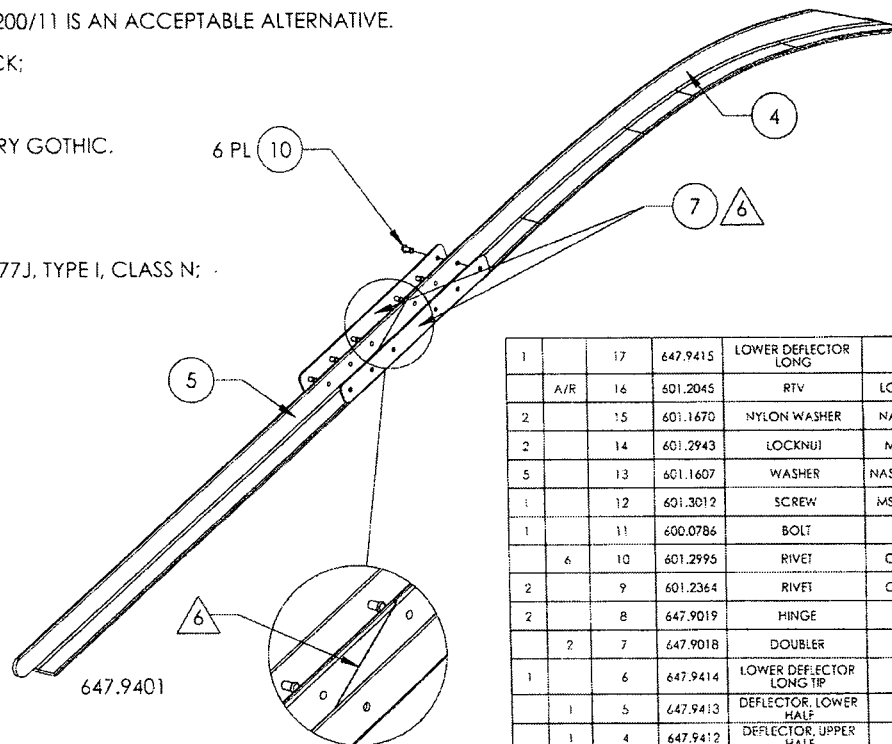
7 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX. APPLY FINISH AFTER ASSEMBLY.

8 TORQUE 15-20 IN.-LBS.

9 DIMENSION SHOWN IS FOR INSPECTION AFTER FINISHING.

UNINCORPORATED ECN(S)

03739

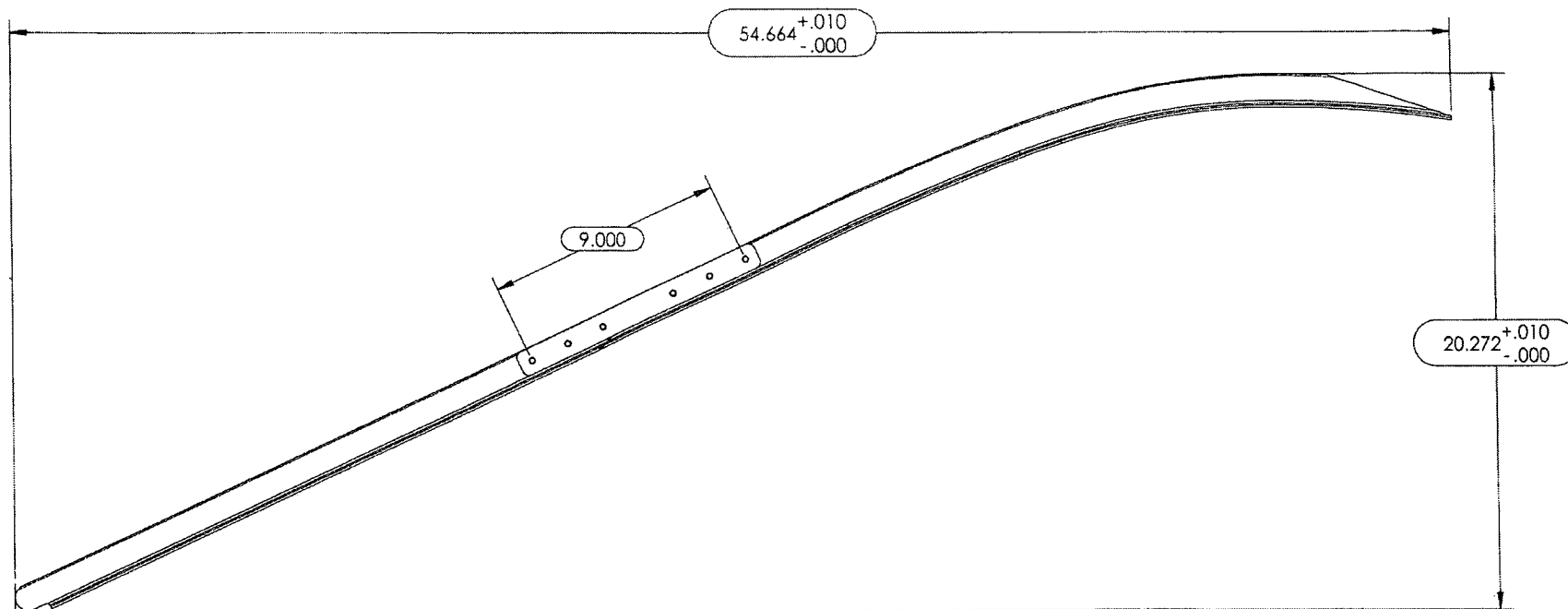


1		17	647.9415	LOWER DEFLECTOR LONG		
	A/R	16	601.2045	RTV	LOCTITE 596	
2		15	601.1670	NYLON WASHER	NAS1515H3L	
2		14	601.2943	LOCKNUT	MS21042-3	
5		13	601.1607	WASHER	NAS1149G0332P	
1		12	601.3012	SCREW	MS27039-1-15	
1		11	600.0786	BOLT	AN3C7A	
	6	10	601.2995	RIVET	CR3213-6-6	
2		9	601.2364	RIVET	CR3213-4-8	
2		8	647.9019	HINGE		
	2	7	647.9018	DOUBLER		
1		6	647.9414	LOWER DEFLECTOR LONG TIP		
	1	5	647.9413	DEFLECTOR, LOWER HALF		
	1	4	647.9412	DEFLECTOR, UPPER HALF		
1		3	647.9501	QUICK RELEASE PIN ASSY		
		2	647.9411	UPPER DEFLECTOR		
		1	647.9410	LOWER DEFLECTOR		
			647.9402	LOWER DEFLECTOR LONG ASSY		
			647.9401	DEFLECTOR ASSY		
9402	9401	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
QTY		PARTS LIST				
NEXT ASSEMBLY:		APICAL INDUSTRIES				
647.8900		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-53				
647.9200		DEFLECTORS				
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACES DECIMALS ± .010 4 PLACES DECIMALS ± .005 CONTRACT NO.				
		REV CAD CODE DWG NO. 647.9400				
		SCALE NONE SHEET 1 OF 1				

APICAL INDUSTRIES 7608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300			
DEFLECTORS			
SEE B	CASE CODE 07MR6	DWG NO 647.9400	REV A
SCALE: NONE		SHEET 1 OF 9	

108728

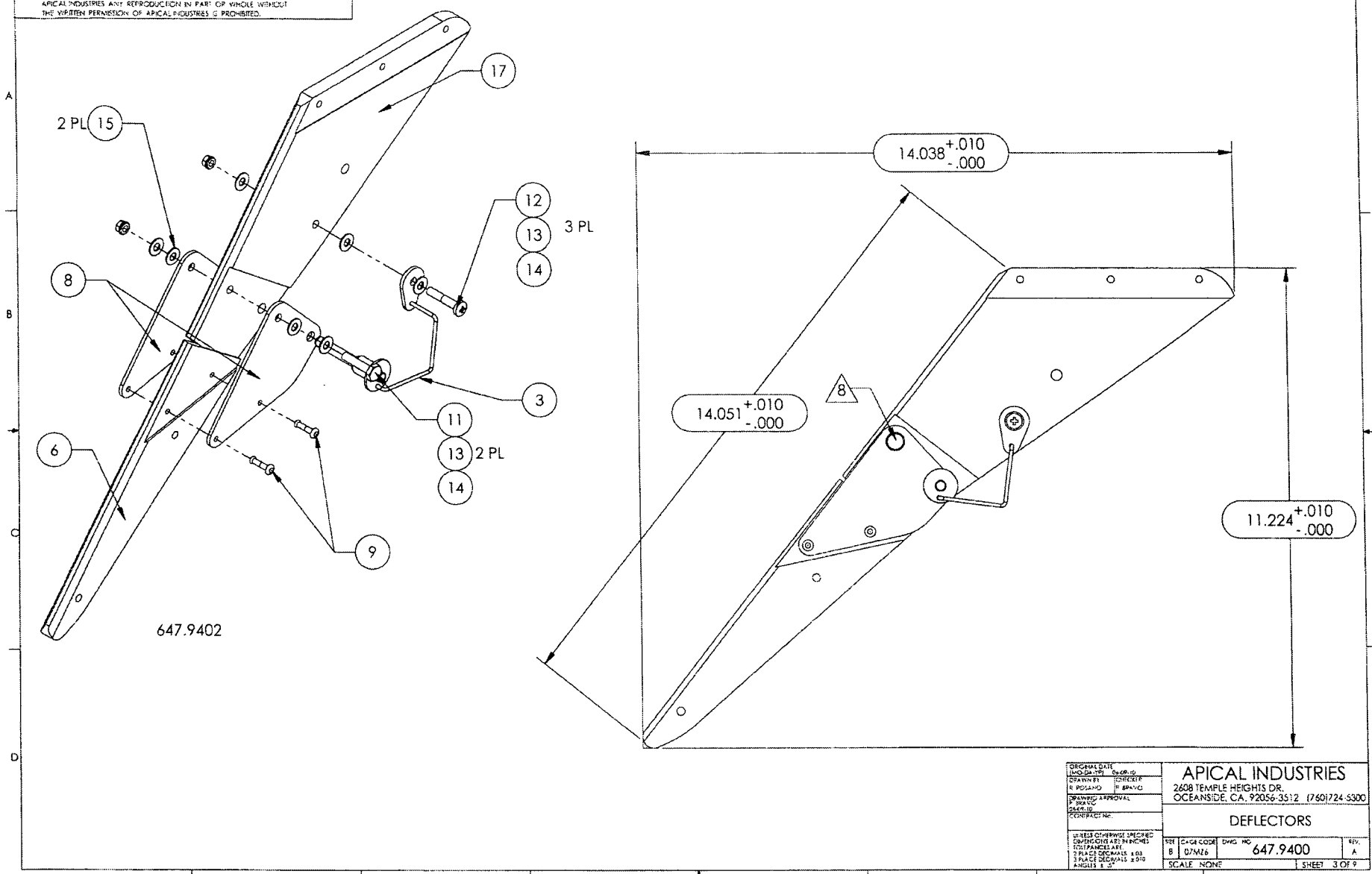
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<small> OFFICIAL DATE 10/01/10 DRAWN BY R. ROSANO DRAWING APPROVAL R. ROSANO CHECKED BY R. ROSANO </small>		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
<small> UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE FRACTIONS DECIMALS ANGLES 1/16 0.0000 1/16 0.0000 1/16 0.0000 </small>		<small> DEL CAGE CODE B 07M26 </small>	<small> DWG NO. 647.9400 </small>
<small> SCALE NONE </small>		<small> SHEET 2 OF 5 </small>	<small> REV A </small>

108728

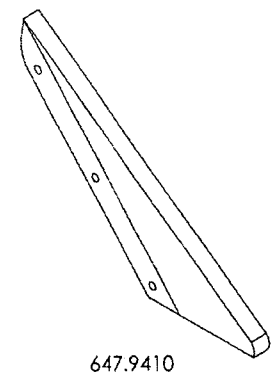
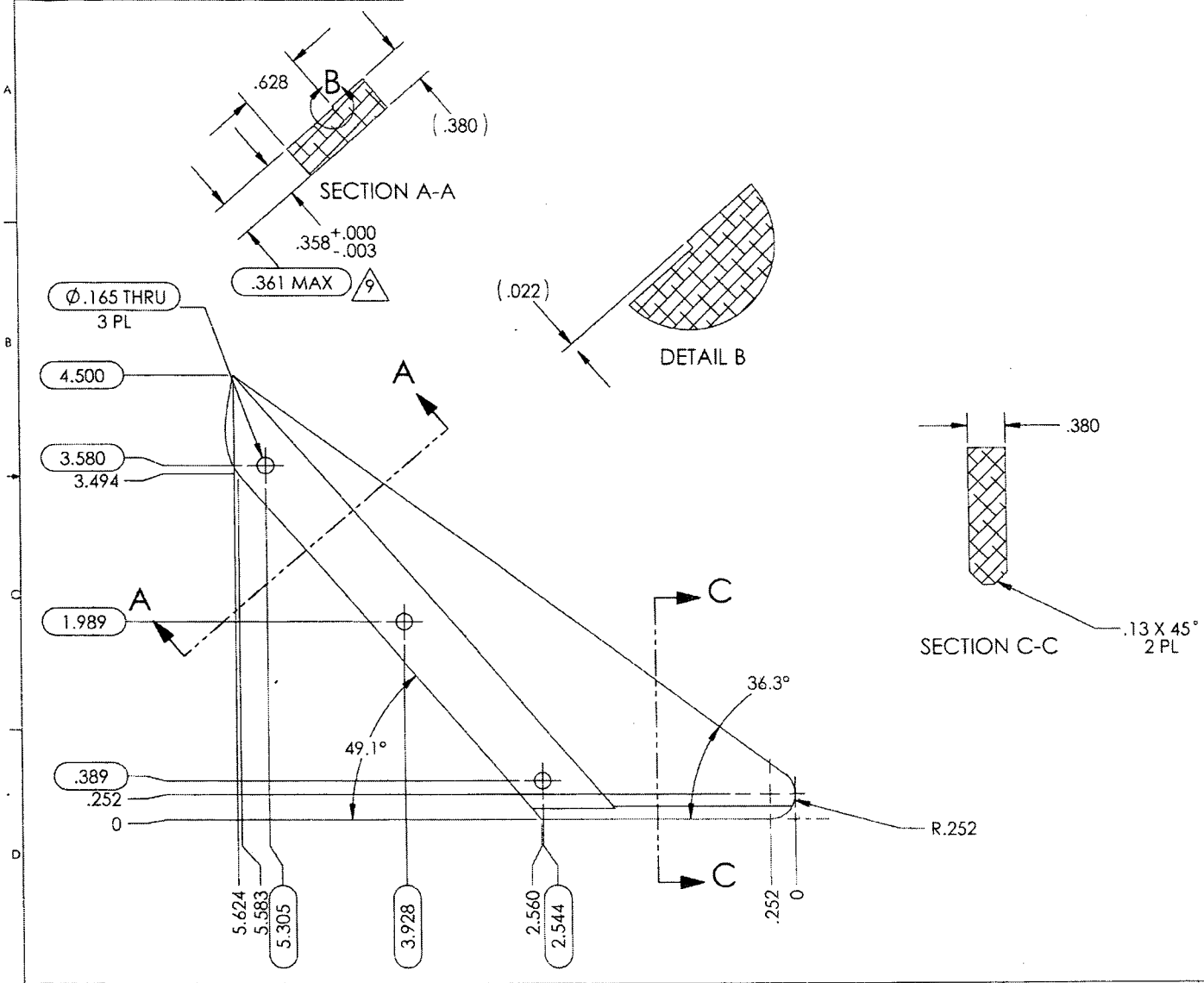
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ORIGINAL DATE 10-04-2011	DRW. NO.	APICAL INDUSTRIES	
DRAWN BY J. HOSKINS	CHKD BY J. HOSKINS	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760) 724-5300	
DRAWING APPROVAL DATE 10-04-2011	REV.	DEFLECTORS	
CONTRACT NO.	REV.	647.9400	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.003 ANGLES ±.5°	SCALE: NONE	SHEET 3 OF 9	

108728

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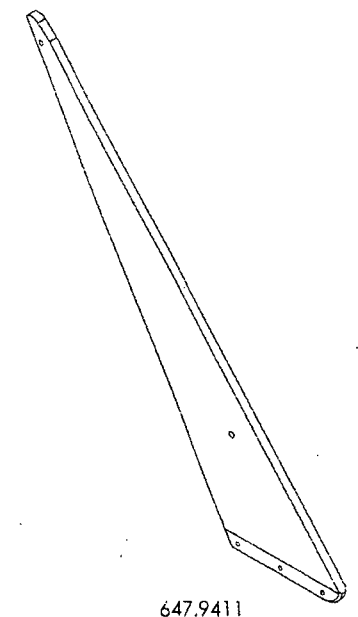
ORIGINAL DATE 10/03/07		REV. NO. 01	
DRAWN BY P. POSLAND		CHECKED BY P. POSLAND	
DESIGNED BY P. POSLAND		APPROVED BY P. POSLAND	
PROJECT NO. 647.9410		SHEET NO. 4 OF 9	

APICAL INDUSTRIES
 2608 TEMPLE HEIGHTS DR.
 OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

SCALE: NONE

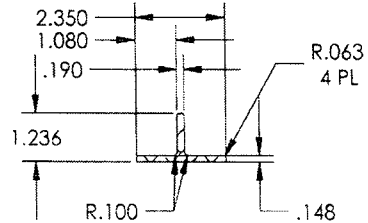
827801



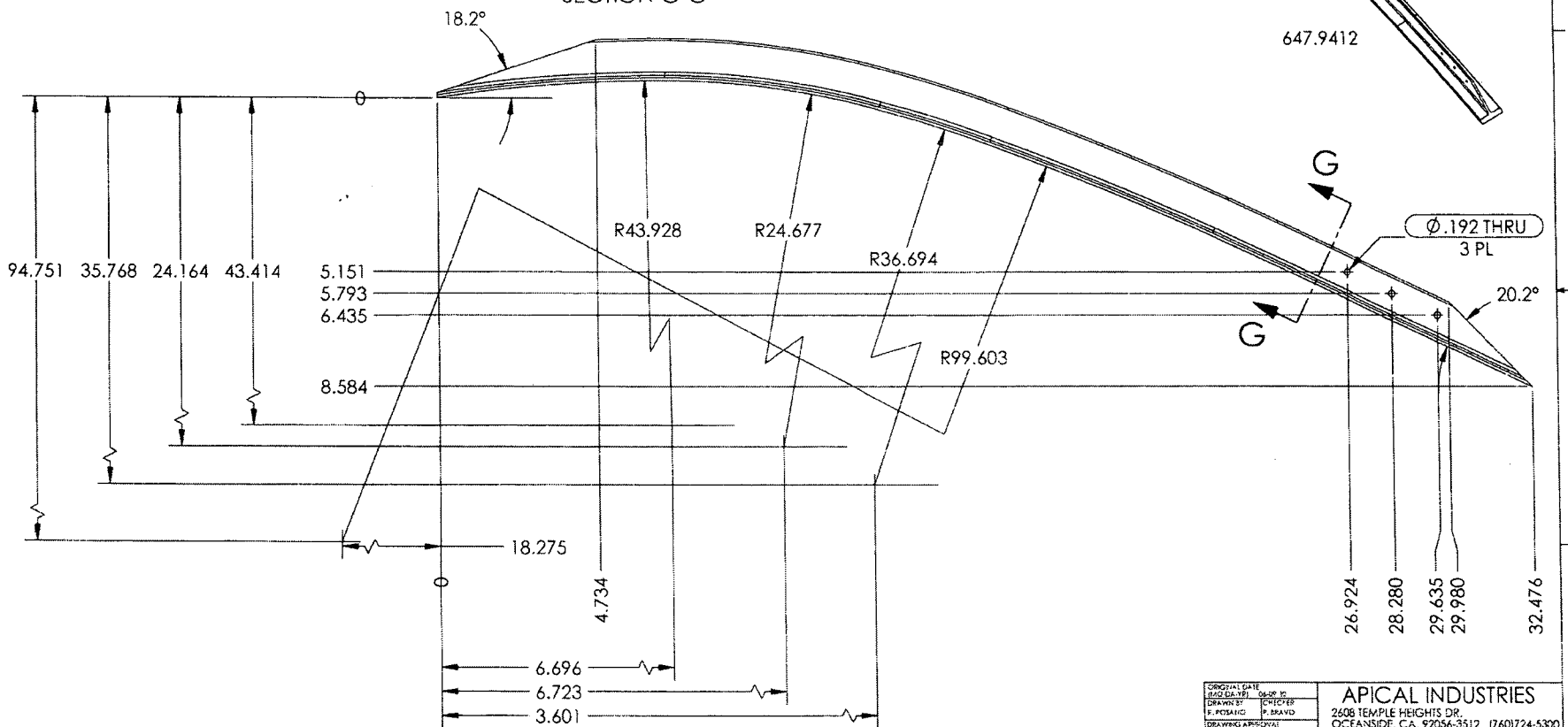
ORIGINAL DATE: END DATE: WORK ID:	<h1>APICAL INDUSTRIES</h1> <p>2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300</p>		
DRAWN BY: CHECKED BY:	<h2>DEFLECTORS</h2>		
DESIGNED BY: APPROVED BY:	<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS DECIMALS & 01 TOLERANCE DECIMALS < .005 ANGLES</p>		
DATE: SCALE: NONE	SHEET 8 OF 9	DWG. NO. 647.9400	REV. 3 OF 9

108728

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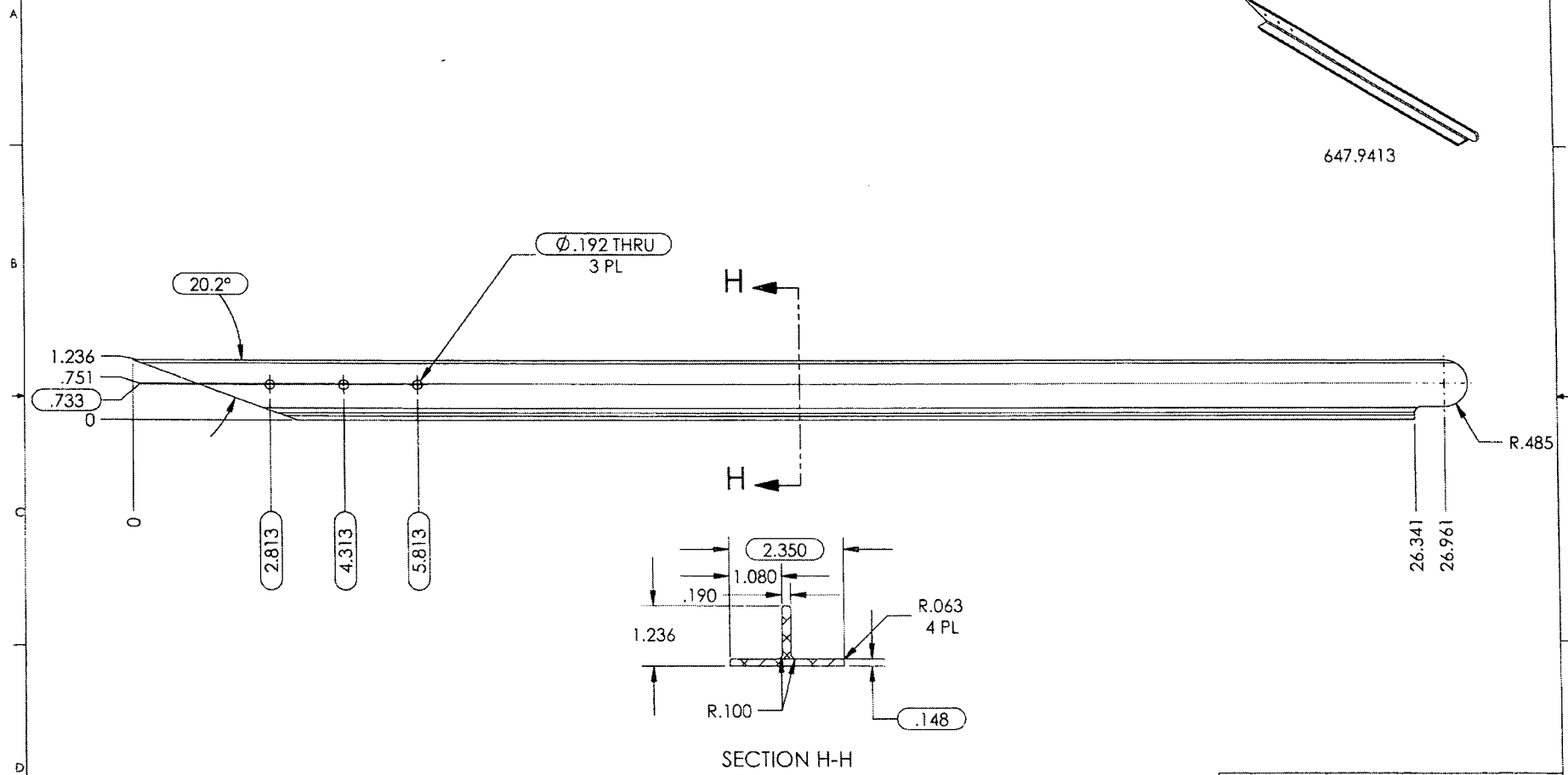
SECTION G-G



ORIGINAL DATE (8/22/84-1/85) 06-28-80	APICAL INDUSTRIES		
DRAWN BY F. ROSARIO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300		
CHECKED BY P. BRAVO			
DRAWING APPROVAL P. BRAVO			
DATE 06-28-80			
CONTRACT NO. 140			
DEFLECTORS			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE 1 PLACES DECIMALS ± .01 2 PLACES DECIMALS ± .005 ANGLES ± .5°			
SHEET B	SHEET CODE 07M16	DWG. NO. 647.9400	REV. A
SCALE NONE			SHEET 6 OF 9

108728

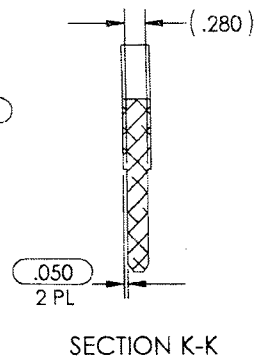
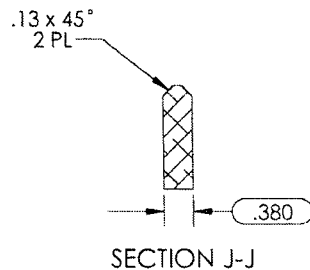
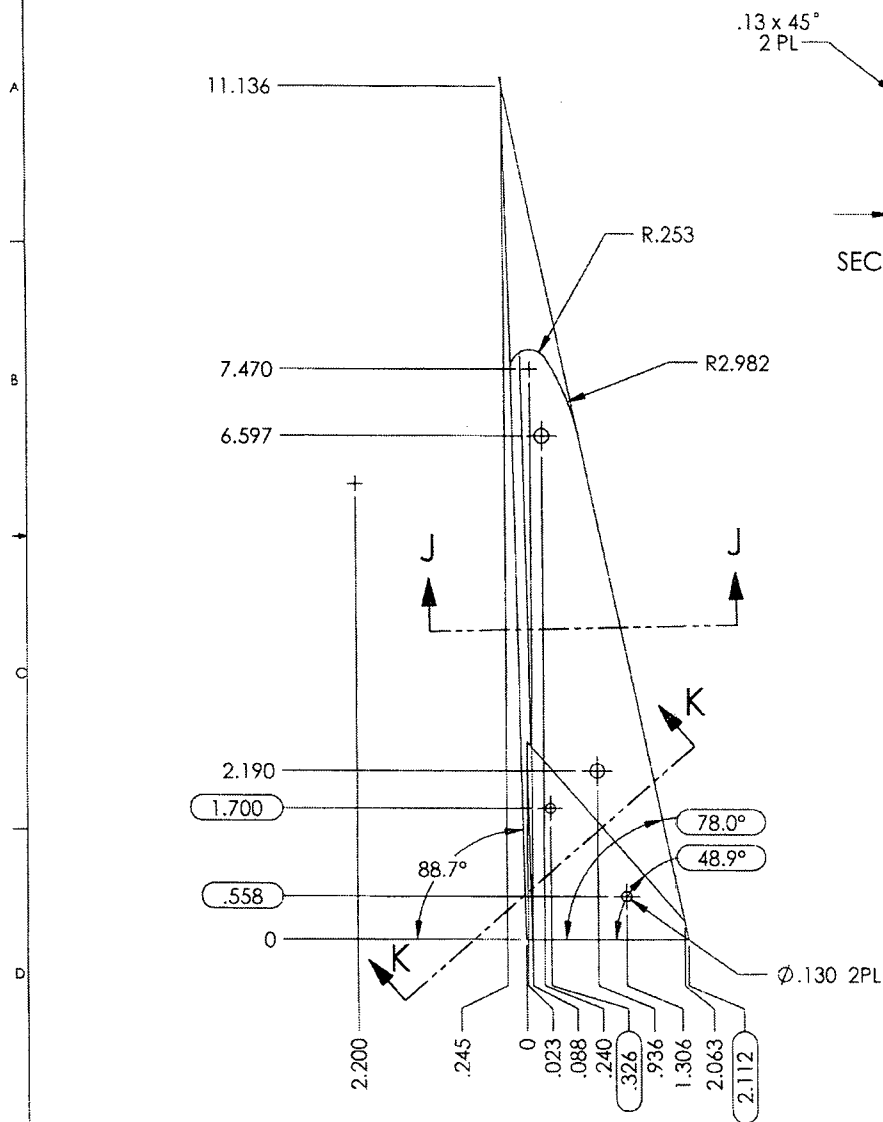
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ORIGINAL DATE: 04-09-10		APICAL INDUSTRIES	
DRAWN BY: H. FOLAND	CHECKED BY: M. EBYO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL: M. EBYO		DEFLECTORS	
CONTRACT NO:		SEE: 647.9400	REV: A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ±.5°		SCALE: NONE	SHEET 7 OF 9

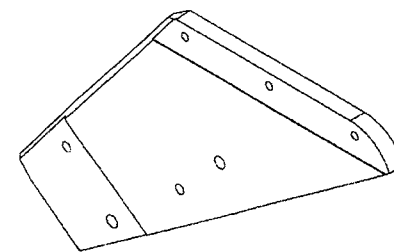
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ORIGINAL DATE REVISED DATE		APICAL INDUSTRIES	
DRAWN BY P. KOSANO		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
CHECKED BY P. KOSANO		DEFLECTORS	
DRAWING APPROVAL P. KOSANO		647.9400	
CONTRACT NO.		SCALE: NONE	SHEET 8 OF 9
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°		SIZE: 8 1/2" x 11" DATE: 10/1/86	REV: A

108728



DETAIL Q

ORIGINAL DATE BACT-DAT-18	WORK ID 3000-10	<h1>APICAL INDUSTRIES</h1> <p>2608 TEMPLE HEIGHTS DR OCEANSIDE, CA 92056-3512 (760)724-5300</p>	
DRAWN BY P. POLAK NG	CHECKED R. BRYAN		
DRAWING APPROVAL P. POLAK NG	DATE 10/2/90		
CONTRACT NO.		<h2>DEFLECTORS</h2>	
ENCL 53 OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. * CIRCUMFERENCE A-1 * CIRCUMFERENCE A-2 * PLACE DIMENSIONS IN * * PLACE DIMENSIONS IN * * PLACE DIMENSIONS IN *		SET 07/16/86 SCALE NONE	DWG NO 647.9400 SHEET 9 OF 9
		REV A	



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada
Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 62794

Date: 18-Dec-13

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To


DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
1 lot	Part: ASST Rev: 16 PCS D4410-11 (0.90) 22 PCS 41232-200-002-001 (1.60) 20 PCS D2348 (0.95) BLACK ANODIZE MIL-A-8625 TYPE II CLASS 2 12 PCS 646.3311 (18.10) 6 PCS 646.3012 (19.90) 8 PCS 647.4610 (12.05) 8 PCS 647.9312 (8.55) 27 PCS 647.9317 (18.00) 6 PCS 647.9411 (24.50) 38 PCS 649.8310 (14.50) HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 PRIME MIL-P-23377J TYPE I CLASS N PRICE IS PER PIECE Job: 20130775 PO: 22153 Line:		
Certificate of Conformance			
A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.			
ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY			
DATE: 18/12/13			
CERTIFIED SIGNATURE: 			
RECEIVER SIGNATURE: _____			